

*Original*

RECEIVED

OCT 19 1998

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

BEFORE THE  
**FEDERAL COMMUNICATIONS COMMISSION**  
WASHINGTON, D.C.

In the Matter of

Revision of the Commission's Rules to  
Ensure Compatibility With Enhanced  
Enhanced 911 Emergency Calling System

)

)

)

)

)

and

Our Petition for Reconsideration to the  
Part 95 Para. 22.919 - ESN Rule  
also known by Cellular Extension Phones

)

)

)

CC Docket No. 94-102  
RM-8143

CC Docket No. 92-115

**REPLY COMMENTS OF THE  
INDEPENDENT CELLULAR SERVICES ASSOCIATION  
AND CELLTEK & MT COMMUNICATIONS**

Ron Foster  
President  
Independent Cellular Services Association  
and for Celltek and MT Communications  
Box 2171  
Gaithersburg, Maryland

301 523-5187  
ICSA@Bigfoot.Com

October 18, 1998

No. of Copies rec'd  
List ABCDE

*049*

RECEIVED

OCT 19 1998

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

BEFORE THE  
**FEDERAL COMMUNICATIONS COMMISSION**  
WASHINGTON, D.C.

In the Matter of	)	
	)	
Revision of the Commission's Rules to	)	CC Docket No. 94-102
Ensure Compatibility With Enhanced	)	RM-8143
Enhanced 911 Emergency Calling System	)	
	and	
Our Petition for Reconsideration to the	)	
Part 95 Para. 22.919 - ESN Rule	)	CC Docket No. 92-115
also know by Cellular Extension Phones	)	

**REPLY COMMENTS OF THE  
INDEPENDENT CELLULAR SERVICES ASSOCIATION  
AND CELLTEK AND MT COMMUNICATIONS**

The Independent Cellular Services Association ("ICSA") submits its Reply Comments in the above captioned proceedings relative to the Comments filed by the Cellular Telecommunications Industry Association ("CTIA") and other wireless carriers who are members of CTIA. These comments are in response to an ex parte presentation filed by the Ad Hoc Alliance for Public Access to 911 ("Ad Hoc Alliance"). ICSA represents a group of small companies that petitioned the FCC in December 1994 to permit cellular extension telephones that operate in the same manner as wireline phones in homes and businesses which have the same number. If permitted these extension phones together with Strongest Signal would give the public the greatest opportunity to complete emergency 911 calls.

## **I. Introduction and Summary**

ICSA has reviewed the comments of CTIA and the other carriers that have been filed in opposition to the Ad Hoc Alliance's efforts to improve consumer safety and security when cellular 911 calls are made. ICSA continues to support the Strongest Signal proposal and urges the Commission to move quickly to implement the technology in all new phones. In the Trott report that was attached to the Ad Hoc Alliance's September 17, 1998 letter, **an alarming conclusion that 1/3 of all cellular calls including those to 911 made by portable phones from inside a vehicle in suburban and rural areas will not be completed.** Attached to this document are two recent ex parte filings by ICSA that should be part of the record which detail our support of the Ad Hoc Alliance's request. These filings quote a test report from Mobile Radio Technology run by CTIA member Antenna Specialists that **up to 1/3 (30 dB) of the signal can be lost** by using a portable inside a car because of the metal car body, metalized window tint and body of the driver. This is troubling because up to 95% of all phones sold today are portables. It is no wonder that critical 911 calls are not getting through. In the much publicized Spielholz incident, she was unable to complete a call in the urban Los Angeles market which indicates that this problem exists in urban areas as well. Very simply, the Strongest Signal approach doubles the chances of a cell phone finding a cell site with the Strongest Signal by slightly modifying the software in cell phones by having it scan all 42 control channels instead of just the 21 of the A or B side.

Some testing and a conversation with Ericsson makes us believe they have already installed Strongest Signal in all of their new analog phones. The Commission should contact them to verify this information because they have not responded to our request to get it in writing.

According to CTIA's own web site, there have been 80 million phones produced in this country. Most of the new phones are portables. Unfortunately the owners of these older phones will not be protected even if the Strongest Signal proposal is adopted. ICSA has made several proposals which center on allowing cellular users to have a powerful installed car phone on the same phone number with a portable that is used outside the vehicle with a single monthly fee. This proposal coupled with Strongest Signal will dramatically increase public safety which should be the Commission's chief concern in this rule making. Despite almost 5 years of efforts consisting of thousands of pages of submissions and countless meetings at the Commission, no ruling has been made relative to ICSA's petition to permit extension phones.

## **II. The Forward Control Channel is Basic to the Operation of the Cellular System.**

In CTIA's filing, they state that the "forward control channel, however, is not an adequate measure of system quality" in an effort to reject Strongest Signal. CTIA tries to make a claim without any proof that that "many parameters are used" but this is not true. In our September 17, 1998 letter to Chairman Kennard, Attachment 2 from Motorola's service manual shows that the Strongest Control Channel is all that is used by the rather simple logic of the phone. Therefore we

conclude that using all 42 channels instead of just 21 of a single carrier is a superior approach and no harm can come to the network.

**III. The “Automatic A/B Roaming” approach proposed by CTIA is only slightly better than setting current models of phones to Scan A/B or Scan B/A.**

If a phone tries to place a 911 call with “Automatic A/B Roaming” and has a weak -100 dBm signal then it will still stay with that home side even if it can’t complete the voice call when the other carrier presents, for example, a much better -70 dBm signal. Scanning all 42 channels and selecting best signal or the Ad Hoc -80 dBm “good signal” are the only alternatives that will work.

**IV. CTIA and the wireless industry blames the Commission for delays and frustrations in the realization of the Phase I and Phase II implementation. ICSA does not see any evidence of this in the record.**

ICSA believes the simple software modification of new cellular phones to scan all 42 control channels instead of 21 for a single carrier should have been made years ago. It appears to us that CTIA has blown this rather minor technical change into a major issue consuming too much Commission time. For good Phase II location accuracy, it is obvious that better operation and accuracy is dependent receiving a good strong signal regardless of which technology is chosen by the carriers.

**V. We believe it is unfair of the wireless industry to twist the compromise that the Ad Hoc Alliance made to modify their Strongest Signal to “Good or Adequate” as a sign of weakness or to “trigger a patent”.**

APCO and NENA were convinced by the industry that somehow the

Strongest Signal approach would cause choke points in reaching the PSAP at a major accident site. In our attached September 17 filing, we pointed out the real issue is not too many calls at an accident scene but none. We quote Dr. Jeffery Michael of the National Highway Traffic Safety Administration who testified at H.R. 3844 911 hearings that the "majority of fatal accidents occur on our rural roads" and "rural crashes have gone unreported for hours". These rural crashes are the ones that the Commission should be the most concerned about. Using the -80 dBm "good" signal approach was a compromise made to reduce or eliminate the overload problem in an urban area where there are many people calling 911. If a patent problem were to exist, then we believe that Strongest Signal could be used because we don't believe the choke problem is real but a merely a compromise made to move forward on this issue. Expanding the number of channels scanned from the current 21 to 42 should not be patentable.

**VI. Regardless of whether the Commission adopts Strongest Signal, Good Signal or Automatic A/B Roaming, there will about 60 to 80 millions phones that will not be protected by one of these improved technologies. ICSA urges the Commission to move forward on its petition for extension phones in Docket No. 92-115 which will greatly improve cellular users' chance of reaching 911.**

In our attached October 6, 1998 letter to the Commission, we detailed additional actions that the FCC should take to improve 911 calling. We have summarized them below:

1. The Commission should approve our 5 year old petition (Docket 92-115) to permit extension phones so customers can have a powerful, 3 watt, hands free,

installed car phones as an extension to their portable(or vice versa). This would let users have one phone number and one monthly access charge.

2. If software patches, with whatever technology the Commission selects under this Rule Making, are available from the phone manufacturers, we are willing to install this code when we reprogram the phones to make them extensions.

3. Recall the tens of millions of phones that do not meet the type acceptance rules under 22.919 which we have requested the Commission to take action on a number of times. When these phones are brought into cellular dealers for type acceptance modifications then they could also install the Strongest/Good Signal software patch.

4. Cellular customers should be warned by a number of different possible methods that handheld phones do not work inside cars as well as 3 watt mobiles.

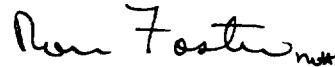
Consumers can then make an informed decision as to the type of phone to use.

## **VII. Conclusion**

ICSA does not believe that the Wireless Industry, including their lobby group CTIA, have met their burden of proof to block the Ad Hoc Alliance's Strongest/Good Signal proposal to improve the public's access to emergency services. It is true that the wireless industry has completed millions of 911 calls that have saved thousands of lives and we applaud them for that fact. On the other hand, it is unconscionable that the industry would fight against these life saving proposals while at the same promoting safety and security of cellular telephones such that 60% of their customers use 911 as justification for buying service. We believe that a combination of Strongest Signal and the use of Extension Phones

give the public the best chance of reaching a 911 operator. We therefore request that the Commission approve both petitions because they are clearly in the Public Interest.

Respectfully submitted,

A handwritten signature in cursive script that reads "Ron Foster".

Ron Foster  
President  
Independent Cellular Services Association  
and for Celltek and MT Communications  
Box 2171  
Gaithersburg, Maryland 20886

301 523-5187  
ICSA@Bigfoot.Com

October 18, 1998

Attachments: Our Comments dated October 6, 1998  
Our Letter to Chairman Kennard dated September 17, 1998



**ROBERT J. KELLER, P.C.**  
**Federal Telecommunications Law**  
**4200 Wisconsin Avenue, N.W.**  
**Suite 106 - Box 233**  
**Washington, D.C. 20016-2157**

Telephone: 301.229.6366  
Facsimile 301.229.6876  
Email: [rjk@telcomlaw.com](mailto:rjk@telcomlaw.com)  
[www.his.com/~rjk/](http://www.his.com/~rjk/)

RECEIVED

OCT - 5 1998

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY  
Of Counsel:

Shainis & Peltzman, Chartered  
1901 L Street N.W., Suite 200  
Washington DC 20036-3606  
Tel: 202-293-8011 ext. 200

October 5, 1998

Magalie Roman Salas, Secretary  
Federal Communications Commission  
1919 M Street, N.W. - Room 222  
Washington, D.C. 20554

In re: CC Docket No. 94-102 (Wireless 911 "Strongest Signal" Proposal)  
CC Docket No. 92-115 (Cellular ESN - Petition for Reconsideration)

Dear Ms. Salas:

Independent Cellular Services Association ("ICSA"), by its counsel and pursuant to Section 1.1206(b)(2) of the Commission's Rules and Regulations, 47 C.F.R. § 1.1206(b)(2), submits for inclusion in the record of the above-referenced proceedings this notice of permissible oral *ex parte* communications. We are submitting an original and four copies of this letter so that there will be at least two copies for each docket.

On September 30 and October 1, 1998, representatives of ICSA met with the Commission officials indicated in the cc's below (and various members of their respective staffs) to discuss various aspects of the above-referenced matters. The substance of the matters discussed are set forth in letters to Chairman William E. Kennard, dated January 23, 1998, and September 17, 1998, both of which were previously submitted for inclusion in the appropriate docket files.

Kindly direct any questions or correspondence concerning this matter to the undersigned.

Very truly yours,



Robert J. Keller  
Counsel for Independent Cellular Services Association

cc: Dan Conners, Legal Assistant to Commissioner Ness  
Peter A. Tenhula, Legal Advisor to Commissioner Powell  
Paul E. Misener, Senior Legal Advisor to Commissioner Furchtgott-Roth  
Dale Hatfield, Chief, Office of Engineering and Technology  
Daniel Phythyon, Chief, Wireless Telecommunications Bureau  
John Cimko, Chief, Policy Division, Wireless Telecommunications Bureau  
Nancy Boocker, Deputy Chief, Policy Division, Wireless Telecommunications Bureau  
Stephen Markendorf, Deputy Chief, Commercial Wireless Division, Wireless Telecommunications Bureau

# Independent Cellular Services Association

Box 2171, Gaithersburg, Maryland 20886 ; E-Mail [ICSA@Bigfoot.Com](mailto:ICSA@Bigfoot.Com); 301 523-5187

October 6, 1998

Ms. Magalie R. Salas  
Secretary  
Federal Communications Commission  
1919 M Street, N. W.  
Washington, D. C. 20554

Re: DA 98-1936 Comments - Submission for CC Docket No. 94-102 - 911 Strongest  
Signal and CC Docket No. 92-115 - Cellular Extension Phones

Dear Ms. Salas:

Independent Cellular Services Association ("ICSA") offers these further comments in response to the Commission's September 22, 1998, Public Notice (DA 98-1936) in the CC Docket No. 94-102. We are also submitting additional copies of this letter and ask that it also be associated with the public file in CC Docket No. 92-115.

ICSA believes the Ad Hoc Alliance has pointed up some very serious dangers to public health and safety that the Commission must address. The public interest mandate of the Commission requires it give top priority to issues of safety in discharging its duties, and this is particularly true where, as here, the safety issues are critical ones often rising to the level of life-and-death. It is precisely because of these important safety considerations that ICSA strongly supports the Ad Hoc Alliance for Public Access to 911 and their proposal to use -80 dBm for wireless telephones to determine if a good signal is available for 911 calls.

We call your attention to the Trott report referenced in the September 22 Public Notice. On the bottom of Page 4 is the startling revelations that "calls from a portable cellular telephone **will not be successfully completed approximately one third** of the time in these rural and outer suburban calls. We do not expect to see any dramatic change in this situation in the foreseeable future." (emphasis added). On page 2 of our attached September 17, 1998 submission (which was prepared before we obtained the Trott report) we independently reported a similar conclusion: "A portable when used inside a car can lose as much as 1/3 of its transmitted signal ...". This, in and of itself, is a sufficient reason for the Commission to mandate strongest signal immediately.

But the strongest signal proposal, while imperative, does not adequately address the safety concerns. Sixty percent the public buy a cellular telephone primarily for safety and security reasons, and the industry in fact touts this aspect prominently in its marketing.

Yet, according to CTIA figures, 85% of all new phone sales are low powered portables (operating at only 0.6 watt or less) rather than higher powered mobiles (generally operating at three watts of power through an external gain antenna). Our experience in marketing cellular equipment indicates that in many areas of the country the preference for portables over mobiles is closer to 95%. This at once makes strongest signal imperative, but it also means that many users will not be able to access 911 services even if strongest signal is implemented. The benefits of portable phones are undeniable, but equally undeniable is the fact that minuscule operating power levels and inefficient antennas diminish the reliability of portables and thus compromise safety and emergency preparedness.

The ideal situation is to have a portable for use outside the vehicle, coupled with three watt capability and an external gain antenna while in the vehicle.<sup>1</sup> Unless a consumer is willing to forego the convenience of a portable unit, however, most find three watt vehicular capability cost-prohibitive. It generally requires either a three watt booster kit, that can cost \$700 or more for some models, or an additional monthly access fee paid to the cellular carrier for a standard mobile unit. ICSA, in its long-pending reconsideration request in CC Docket No. 92-115, offers a viable and affordable alternative, and hence a solution to the portable vs. safety dilemma. Specifically, if the Commission will modify its rules to accommodate extension phones,<sup>2</sup> the typical consumer could have the preferred portable unit plus a three watt mobile at very little cost. (Three watt mobiles are available in moderate price ranges, some models even available for less than \$100.)

There are at least three substantial advantages of the ICSA proposal. First, as already discussed above, it will provide additional reliability and safety over and above that provided by strongest signal alone. Second, the ICSA extension phone proposal will serve immediately to enhance safety during the six to twelve months it will take the cellular industry to implement and fully deploy strongest signal. Third, even after strongest signal is fully implemented, the ICSA extension phone proposal will provide enhanced safety capability for the base of older phones (estimated at nearly 80 million units) that will not be equipped to exploit strongest signal technology.<sup>3</sup>

---

<sup>1</sup> Having a vehicular mounted phone also enhances safety by (a) making it much less likely that attempts to establish communications will be thwarted by dead or weak batteries, and (b) accommodating enhanced safety features, e.g., automatically dialing 911 in the event of air-bag deployment.

<sup>2</sup> In this context, ICSA uses the term extension phone to mean two units programmed with the same ESN-MIN combination, used by the same customer who is responsible for all usage generated on both phones.

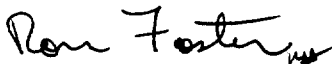
<sup>3</sup> The Commission must address possible fixes to these older phones still used by an unsuspecting public who think their units are going to help them in a moment of need.

For all of these reasons, and the reasons set forth in our earlier submissions in both of the referenced dockets, ICSA proposes the following for Commission consideration and adoption:

- Permit customers to have powerful, 3 watts, hands free, installed car phones as an extension to their portable (or vice versa) as requested in our petition in Docket 92-115. This would let users have one phone number and one month access charge.
- If software patches are made available for strongest signal by the manufacturers, ICSA members are willing to upgrade the software in older units at the same time as they are re-programmed to create the extensions units suggested by this proposal.
- Recall the tens of millions of phones that do not meet type acceptance under section 22.919 of the rules and even CTIA's own certification program. Details on this issue were provided to the Commission in previous filings. When these phones are modified to meet type acceptance, the manufacturers could install the strongest signal software patch.
- We believe the public should be made aware that portable phones used inside vehicles do not work well in rural and suburban areas. A warning contained in the service contract and/or the addition of a coverage/signal contour map for in-vehicle portable usage should be provided to the consumer to make them aware of this critical safety issue.

We believe that the Ad Hoc Alliance has pointed out some dangerous flaws relative to 911 emergency calls in the nationwide wireless network. A combination of strongest signal and 3 watt extension phones provide the public with the greatest margin of safety and security - we request that the Commission approve both.

Sincerely,



Ron Foster  
President, ICSA  
For MTC Communications and CellTek

Attachment - Our September 17, 1998 Letter  
cc Mr. Dan Phythyon  
Mr. John Cimko

# Independent Cellular Services Association

Box 2171, Gaithersburg, Maryland 20886 ; E-Mail ICSA@Bigfoot.Com; 301 523-5187

September 17, 1998

The Honorable William E. Kennard  
Chairman, Federal Communications Commission  
1919 M Street, N. W.  
Washington, D. C. 20554

RE: Comments on CC Docket 94-102 "Strongest Signal" and its relationship to our  
Petition for Reconsideration in CC Docket No. 92-115 - Rule 22.919 Cellular Extension  
Telephones - Ex Parte Filing.

Dear Chairman Kennard:

**Summary -** The Independent Cellular Services Association(ICSA) has followed with interest all of the information in the trade press relative to the activities of the Ad Hoc Alliance for Public Access to 911. ICSA applauds the Alliance's efforts to improve the public's chance of reaching 911 by asking the FCC to require the cellular industry to implement a solution to compensate for some major flaws in the national cellular network. ICSA has previously written the Commission about similar improvements using other technical approaches, i.e. Extension Phones. ICSA is a trade association of small businesses that sell and service cellular telephones. Our members all have technical backgrounds and have dealt first hand with thousands of cellular customers. We have conducted our own analysis of the issue of 911 calls not getting through and have discovered critical information that further supports the Alliance's position. Given the fact that the cellular industry's own figures show that 60% of our customers purchase wireless phones for the safety that they are suppose to offer, it truly amazes us that CTIA, APCO and others are so opposed to this very logical modification to the rules which will speed rescue workers to an emergency - this is clearly in the public interest. Summarized below are our key points that we will provide added details later in this document:

- A. **ICSA fully supports the Strongest Signal Proposal** - The Ad Hoc Alliance has discovered some major flaws in the nationwide cellular system and is doing the public a great service by trying to correct them. The Commission should adopt their proposal. ICSA has look at the various arguments put forth by the opponents such as CTIA and APCO and believe they have no merit as will be explained in detail later..
- B. **ICSA has discovered additional significant flaws that must be corrected using Strongest Signal Technology** - ICSA was aware that many carriers and their dealers program the phones they sell to only their A or B side of the system. ICSA found that most carriers follow this practice to improve call delivery and roaming. There are

many areas both rural and urban where there is only one carrier. One example that all Commission members should appreciate exists in the Washington, DC area; the underground Metro system only has Bell Atlantic - the B carrier. This creates a hazardous situation for local Cellular One customers, visitors/roamers and many PCS customers(that default to cellular) who are only programmed or set to the A side only. They can not call 911 for help in the Metro system. The Ad Hoc Strongest Signal proposal would solve this problem and provide safety and security to unsuspecting customers who are not aware of the technical shortcomings/complexities of the cellular system and their phone settings.

- C. **ICSA has had, since 1994, one of the oldest petitions(Docket 92-115) before the FCC. The petition requests the Commission to permit Cellular Extension Phones which together with the Strongest Signal proposal would give the public the greatest opportunity to get 911 calls through to an emergency center - ICSA has shown in many previous filings with the Commission that millions of cellular customers want a 3 watt hands free car phone on the same number as their portable telephone. 80% of the new phones sold today are portables that have a maximum transmitter power of only .6 watts. A portable when used inside a car can lose as much as 1/3 of its transmitted signal when compared to a 3 watt mobile with an outside antenna. Hands free booster kits are very expensive. A 3 watt booster car kit for the very popular Motorola StarTac is about \$700 installed. Information on CTIA's own web page shows that there are between 20 and 30 million cellular phones in the US that have no subscription. Many of these phones are the older 3 watt car or bag phones most of which could be converted to a life saving extension phone if permitted by the FCC. A number of technical reports prepared by cellular expert, Dr. Levine, and submitted to the FCC showed that Extension Phones present no technical problems for the network.**

It is our understanding that if Ms. Spielholz and the Lechuga family had used a 3 watt phone then they would have gotten through to 911 on the carrier they were subscribing to. A change to the other carrier using Strongest Signal would have also gotten them help.

In Attachment A of your letter of July 1, 1998 to Senator McCain, our petition on 92-115 is listed with your target adoption date of January 1999. The reason for the delay cited in your letter is "The staff must review the Congressional legislation concerning cellular phones to determine if the legislation affects this proceeding". Attachment 1 to this letter contains colloquy excerpts from Representative Morella in the House and Senator Leahy in the Senate where they specifically did not want the Commission to be influenced by this legislation relative to our petition. If necessary, they said that they would pass changes to the law. The legislative history of the new law only deals with the hardware and software tools that are used for illegal cloning and not the use or ownership of Extension Phones by legitimate users. **Therefore we urge the Commission to move on our petition now and not wait unit next year.**

- D. Extension Phones and Strongest Signal are critical to public health and safety -** In Dr. Jeffery Michael's (Chief, EMS for National Highway Traffic Safety Administration) testimony before the House Subcommittee on Telecommunications relative to H.R. 3844 ("Wireless Communications and Public Safety Act of 1998"), he states that "Over half of fatal motor vehicle crashes are single vehicle crashes, and the majority of those occur on our rural roads. The average notification time for these rural crashes is twice what it is in urban areas. In some cases, rural crashes have gone unreported for hours." Clearly the issue of safety and saving lives is the key issue here. The problem is not that too many 911 calls jam the public safety answering points as represented by CTIA and APCO but **rather two few or no calls get through!** There was no one there to witness the crime or accident as happened in the cases of Ms. Spielholz and the Lechuga family. This is common sense logic. Rural roads are designed for 3 watt phones and have the weakest signal strength of all areas.

David K. Aylward of COMCARE Alliance testified at the same hearing in favor of automatic crash notification which means that the cellular telephone needs to be connected to the air bag which is part of the car to know that an accident has taken place. Obviously the best way to assure operation is to have an installed car phone which flies in the face of consumers buying 80% portable phones. Except for the wealthiest of people, consumers can not afford to pay two monthly fees; one for the portable and the other for the car phone connected to the air bag. This is clearly a great application for an extension phone just as the home security system is often connected to the same line as the other home phones - all with the same number with a single bill. For these emergency calls to get through 3 watts and Strongest Signal are clearly the answer.

- E. Some critics of the Strongest Signal Proposal point out that the Ad Hoc Alliance proposal only applies to new phones built after any FCC ruling on the matter. ICSA has two proposals that would greatly increase the number of phones with software that will tune the phone to the best signal.**

#1. If the Commission permits Extension Phones and the phone manufacturers produce Strongest Signal software patches, then ICSA members would be willing to install the new software in phones when they are modified for extension phone use. For some phones, it would simply be a matter of plugging a new EPROM into a socket while for others a new chip would have to be soldered into the phone.

#2. ICSA has provided conclusive written and demonstrated proof to the Commission that a number of the largest producers of cellular telephones have manufactured 10's of millions of phones that do not meet FCC type acceptance rules regarding electronic serial numbers. ICSA has suggested to the FCC that these phones be recalled to be modified to bring these phones into compliance. If this action occurred then the manufacturers could also modify them to tune to the Strongest Signal when calling 911 thus increase the public's safety.

- F. The Ad Hoc Alliance previous pointed out that one major manufacturer, Audiovox, has already installed Strongest Signal software in some of their newer phones. ICSA has recently learned that Ericsson also implemented Strongest Signal in its newer analog phones such as the popular AF738. It is obvious that Strongest Signal is needed when two of the biggest manufacturers have already implement this technology quietly on their own - It appears that CTIA and some of the other opponents of Strongest Signal are out of touch with this issue and their case is undermined when two of the largest manufactures of cellular telephones have already implemented this technology on their own.

Listed below are additions and amplifications to the points above with the upper and lower letters matching:

- a. ICSA fully supports Strongest Signal - We believe that the cellular industry understands that there are some critical flaws in operation of the system and the acceptance of Strongest Signal proposal would be an admission of these problems. CTIA's argument that Strongest Signal technology might swamp the trunks of one carrier when emergency calls come in from a major incident is specious. Having too many calls from an accident is far better than no calls. All that is needed is for one or two calls to come in to report an accident or fire. Such calls are typically short on the order of 15 to 20 seconds thereby allowing everyone to eventually get through. In the case of rural areas, the problem is that no calls get through and this fact has cost lives as was explained earlier.
- b. ICSA has discovered additional flaws - As stated in paragraph B above many or most cellular phones are programmed to either the A or B carrier only. We asked the carriers who were surveyed why they did this and there was a good answer given. Cellular phones are programmed to only one side so that incoming calls in the home and roaming markets are successfully delivered to the phone. If the phone is set to scan both channels, either because of momentary loss of the preferred signal or the because of close proximity to a cell site on the opposite system, the phone will switch to that the other system. According to Attachment 2 from the Motorola Service Manual, Motorola phones will stay on that wrong side for 5 minutes until the phone rescans. This means that any incoming calls on the subscribed channel will be missed. Roaming agreement typically are among carriers on the same side. The A's with the A's and the B's with the B's. For placing calls and receiving calls it is important for the phone to be on the proper side. Ericsson AT&T multiband phones switch to cellular when outside the AT&T system. We believe the phones are programmed to go only to the A side where there are roaming or extended area agreements. This can create a dangerous situation when there is no A carrier or the signal is weak.

Recently Pacific Bell had a software glitch which took their network down most of the day. The cellular industry may have year 2000 problems which may also cause whole systems to go down. For all of the above reason, it is extremely important for all phones that work on the cellular channels to have Strongest Signal capability which



means that for a 911 call they can automatically switch to other side should the call not go through on the preferred channel.

- c. Extension Phones and Strongest Signal give the Public the greatest opportunity to have a 911 call go through** - In a January 23, 1998 letter to Chairman Kennard and Ex Parte meetings with numerous members of the Commission, ICSA urged a resolution of its petition. In this lengthy detailed submission, ICSA reminded the Commission of the following summarized points:

1. The Small Business Administration has carefully reviewed this issue and supports our petition to allow Extension Phones.

2. The other highly visible petitioner C2+ reached a confidential settlement with the cellular industry and withdrew its petition.

3. In 1996, Blair Levin and Michele Farquhar who were the key managers at the FCC pledged to resolve the extension phone issue in a matter of months. Years have passed without resolution. In your letter to Senator McCain about the FCC backlog, the schedule date is now January 1999.

4. At a July 1995 summit meeting at the Commission with all parties present including ICSA, CTIA, Motorola, Justice Antitrust, TIA, Ericsson, etc., we were asked for proposed wording to permit Extension Phones. Both our group and C2+ prepared and submitted to the FCC a set of guidelines for Extension Phones with safeguards built into the process. CTIA did not rebut these guidelines so we can only assume that they were acceptable to them. We expected our proposal to be adopted or put out for comment. Despite multiple filings and meeting at the Commission nothing has happened in over 3 years from that meeting and also 5 years after our initial petition.

5. Dr. Levine, a college professor and noted expert in cellular technology, has written numerous reports and attended meeting with the FCC supporting our claim and stating that Extension Phones will not create any harm to the network.

6. Our letter also detailed the health and safety advantages of Extension Phones similar to the points contained in this letter.

7. We pointed out that most of the phone manufactured after the FCC passed 22.919, which was used to put the extension phone industry out of business, violated and did not meet FCC type acceptance rules. We later met with the FCC technical lab engineers and proved our point with demonstrations. We believe tens of millions of phones do not meet the same rule that prevents Extension Phones. We think these phones should be recalled and could be reprogrammed with Strongest Signal software.

8. Finally we pointed out that 1 in 3 cellular users want extension phone service and would save consumers about \$3.4 billion in monthly bills. Instead the industry wants

to charge a monthly fee for each phone which we think is anti-competitive. Through a series of legal actions, the cellular industry have driven all of the US extension firms out of business thereby creating a monopoly for themselves.

- d. Extension Phones and Strongest Signal are critical to public health and safety -** ICSA has repeatedly pointed out that the safest cellular configuration is a handheld/portable phone that can be used when the consumer is not in their vehicle. When driving a vehicle, an installed 3 watt car phone with a handsfree kit is the only way a driver should talk on the phone. We have witness many drivers trying to dial on their portable without their hands on the wheel. This is very unsafe!! Handsfree kits are expensive, prone to failure because of the plugging in and out, and mate with only one make of phone making them obsolete when changing portable phones. If the air bag deployment alarm is dependent always being connected to a portable phone when a driver starts the car, this is not going to work. An extension phone is the answer to this problem.

A recent article in Mobile Radio Technology(available upon request) points out that a portable telephone when used inside a car can have as much as a 22 dBm loss over an outside antenna. A major factor is the shielding of the signal by a person's head and metal coated window glass tint. A three watt car phone with a 3 dBm antenna produces about 10 dBm more signal over a portable. Cellular systems operating with about a 90 dBm to 100 dBm margin. Given these facts, as much as 1/4 to 1/3 of the cellular signal is lost by using a portable phone inside a car. This create an unsafe condition when calling for emergency help. Phase II location systems such as those offered by True Position depend upon a strong signal at a minimum of three sites.

There has been a number of reports around the world that portable cell phones may cause health problems. Industry and the government have failed to conduct conclusively research to determine if handhelds cause problems. Because this is a major issue relative public health, HR 3844 contains funding provisions for NIH to conduct scientific research on portable phones and illness. Until this research is completed which is years away, clearly one way to minimize the risk of a brain tumor, headaches, or some other health problem is to only use a portable phone when on foot - use an installed Extension Phone when in the vehicle.

**Strongest Signal and Extension Phone are clearly in the public's best interest for health and safety reasons and should be approved by the Commission.**

- e. ICSA has several proposals to increase the number of phones that could be equipped with Strongest Signal software.**

As stated above, ICSA members could upgrade older phones to include Strongest Signal when they are brought in to be converted into Extension Phones. Both activities require programming/software updates/changes.

ICSA has provided written proof and demonstrations to the Commission that several

major manufacturers have failed to meet FCC type acceptance rules regarding hardening of the ESN. ICSA has written the Commission suggesting the recall of tens of millions of phones that do not meet the ESN rule in section 22.919. If phones are recalled for modification then they can also be modified for Strongest Signal.

- f. **ICSA has found that Ericsson in addition to Audiovox have already implemented Strongest Signal software in their analog phones. With two major cellular telephone manufacturers already voluntarily placing the software that we and the Ad Hoc group are recommending in their phones, a compelling case is made to require it in all phones.**

We were told that when 911 is entered into the keyboard of the newer Ericsson analog phones, upon SEND it searches all 40 control channels and finds the Strongest Signal regardless of which system the phone is programmed to favor. Tests have verified that when a 911 call is made by an AF738 Ericsson analog phone and the phone is programmed to only work on the A side where there is no signal, the phone switched the 911 call to the B system and completed the call. We searched all of the Ericsson published literature, and no mention of this feature was mentioned. We find this very curious. We also applaud Ericsson for doing the responsible thing.

In conclusion, ICSA supports the Ad Hoc Alliance and believes that their proposals will save lives and correct some major problems with the cellular system. Cellular Extension Phones compliment Strongest Signal and will also increase the health and safety of the public while also providing billions of dollars of savings and a degree of competition in the industry. Please approve the Ad Hoc request and our petition for reconsideration as soon as possible.

Sincerely,



Ron Foster

President ICSA

Also for CellTek and MTC Communications

cc Commissioner Furchtgott-Roth  
Commissioner Powell  
Commissioner Ness  
Commissioner Tristani  
Mr. Dan Phythyon

We have sent this letter to the FCC Secretary as an Ex Parte filing.

## Attachment A

## Wireless Telecommunications Bureau Rulemakings Pending Prior to July 1, 1997

Commercial Wireless Division  
July 1, 1998

Note: The "Target Date," is the projected month for Commission adoption of an item.

Title	Type of Action	Date Received	Target Date	Description Explanation
Cellular ESN (Taken from Part 22 Rewrite) (Docket No. 92-115)	R&O/letter	12/19/94	Jan. 1999	<u>Description:</u> Petitions for reconsideration of section 22.919, which requires the installation of an unique, non-alterable, non-transferrable electronic serial number (ESN) in each phone. The Commission also prohibited alterations of a cellular ESN. <u>Explanation:</u> The staff must review the recent Congressional legislation concerning cellular phones to determine if the legislation affects this proceeding.
City of Roseville (DA 96-1641)	Order	5/23/95	Within 60 days of settlement or notice that settlement can not be reached	<u>Description:</u> Petition for Declaratory Ruling which requests the Commission to preempt Roseville's imposition of an annual CMRS franchise fee based on the carrier's gross revenues. <u>Explanation:</u> Parties asked that we not rule on the petition because they are negotiating a settlement.

## Attachment 1

The removal of the 'intent to defraud' language in 18 U.S.C. 1029 only applies to the possession and use of the hardware and software configured to alter telecommunications instruments. It does not apply to those who are in the possession of cloned phones. Nor does it apply to those in the possession of scanning receivers (which do have some legitimate uses). Someone who does not know that a telecommunications device has been altered to modify a telecommunications instrument would not be criminally liable under this section.

I am very proud of this important crime-fighting legislation and look forward to its prompt signature by the President.

→ Mr. LEAHY. Mr. President, in 1994, I authored the first law to provide specific protection against 'clone' telephones. While the main focus of the Communications Assistance for Law Enforcement Act, or CALEA, was to help our law enforcement agencies deal with the challenge of new digital telecommunications equipment and services, the law also contained important bans on the use and trafficking of clone phones, scanning receivers, and hardware and software used to steal cellular service.

Specifically, in CALEA, we amended the Counterfeit Access Device law, 18 U.S.C. 1029, by adding a provision to criminalize the use and possession, with intent to defraud, of altered telecommunications instruments, or scanning receivers, hardware or software, to obtain unauthorized access to telecommunications services. This law also added to the federal criminal code a definition of scanning receivers to mean devices used to intercept illegally wire or electronic communications.

'Clone' telephones are used illegally to allow free riding on the cellular phone system and result in theft of that service. The cellular telephone industry estimates that it loses \$650 million per year due to clone phones. I recall testimony at hearings I chaired jointly with Representative Don Edwards on CALEA about the need to address this problem in CALEA. Tom Wheeler, President of the Cellular Telecommunications Industry Association, testified in 1994 about:

[Page: S3021]

... people being surprised by 'humongous' cellular bills because somebody had snatched their electronic code out of the air, cloned that into another phone, and was charging phone calls to Colombia or wherever onto their phone.

S. Hrg. 103-1022, at p. 148 (August 11, 1994).

In short, the theft of cellular telephone services amounts to millions of dollars of losses to wireless service providers and to consumers.

Just as disturbing, clone phones are used by drug dealers and other criminals trying to evade police surveillance of their phone conversations. The fraudulent use of electronic serial numbers, which are critical in identifying the cellular phone subject to wiretap orders, represented a real threat to privacy. Mr. Wheeler explained in 1994, 'If you have a situation where there is floating around out there multiple users of the same electronic serial numbers, you don't know who you are tapping.' S. Hrg. 103-1022, at p. 148 (August 11, 1994).

Given the financial losses and the threats to privacy posed by clone phones, I urge the cellular telephone industry to consider the technical means available to better protect cellular phone service. In particular, if strong encryption were used to encrypt the radio waves transmitted from cellular phones to the nearest

cell tower, stealing those signals for use in a clone phone would be much more difficult, if not impossible.

I have long been a proponent of more widespread use of strong encryption. Clone phones are a perfect example of where the use of strong encryption would be far more effective to prevent this crime from occurring than all the criminal laws we could consider passing.

This bill, as modified by the House, builds upon the work we accomplished in CALEA.

Current law contains an 'intent to defraud' requirement that has apparently posed a stumbling block for law enforcement to crack down on the cloning of cellular phones. This bill would remove this intent requirement and make it illegal to use, sell or possess hardware or software knowing it has been configured for the purpose of altering a telephone to steal service.

The House of Representatives made a number of significant improvements to S. 493 to ensure that, upon removal of the 'intent to defraud' requirement, the bill did not sweep too broadly. Indeed, I understand that even some cellular companies were concerned that the original bill introduced by Senator Kyl might inadvertently have applied to machinery used by legitimate companies to test or reprogram their equipment.

Removal of the 'intent to defraud' scienter requirement may still pose problems for those legitimate companies that wish to offer 'extension' telephones for cellular telephones. In fact, the Federal Communications Commission has a proceeding underway to determine whether companies may be allowed to alter the electronic serial number of a cellular telephone to allow more than one phone to have the same contact number.

Passage of this law may be interpreted as prejudging the outcome of that proceeding by making illegal the use of clone phones, even by legitimate subscribers who pay their bills. That would be regrettable. This bill should not affect the outcome of the FCC proceeding, since the public interest may be well served by allowing competition into the extension cellular telephone business. Depending on the outcome of the FCC proceeding, we may be revisiting this legislation.

This bill, as modified by the House, is supported by the FBI, Secret Service and the Cellular Telephone Industry Association (CTIA). We made important progress in this area when we passed CALEA, and I am glad to support legislation that will further help law enforcement combat cellular telephone fraud by those who steal cellular service.

Mr. DOMENICI. Mr. President, I ask unanimous consent that the Senate concur in the amendments of the House.

The PRESIDING OFFICER. Without objection, it is so ordered.

END

WIRELESS TELEPHONE PROTECTION ACT (House of Representatives - February 26, 1998)

Mr. M~~COLLUM~~. Mr. Chairman, I yield such time as she may consume to the gentlewoman from Maryland (Mrs. ~~Morella~~).

~~Mrs. MORELLA~~. Mr. Chairman, I thank the gentleman for yielding me this time. I would like to engage the gentleman in a colloquy on cellular extension phones.

Mr. Chairman, I understand that many cellular subscribers find it advantageous to have two cellular phones with the same number. In this way, someone trying to reach a subscriber need only dial one number and the subscriber will be able to receive the call on either his or her car phone or on his or her portable hand-held phone. I also understand that the FCC currently prohibits companies from altering the electronic serial number of a cellular phone to allow more than one phone to have the same telephone number, but that the commission has been asked to reconsider that rule. I wonder, how would this bill affect the petition for reconsideration of this matter that is now pending before the FCC?

Mr. M~~COLLUM~~. Mr. Chairman, will the gentlewoman yield?

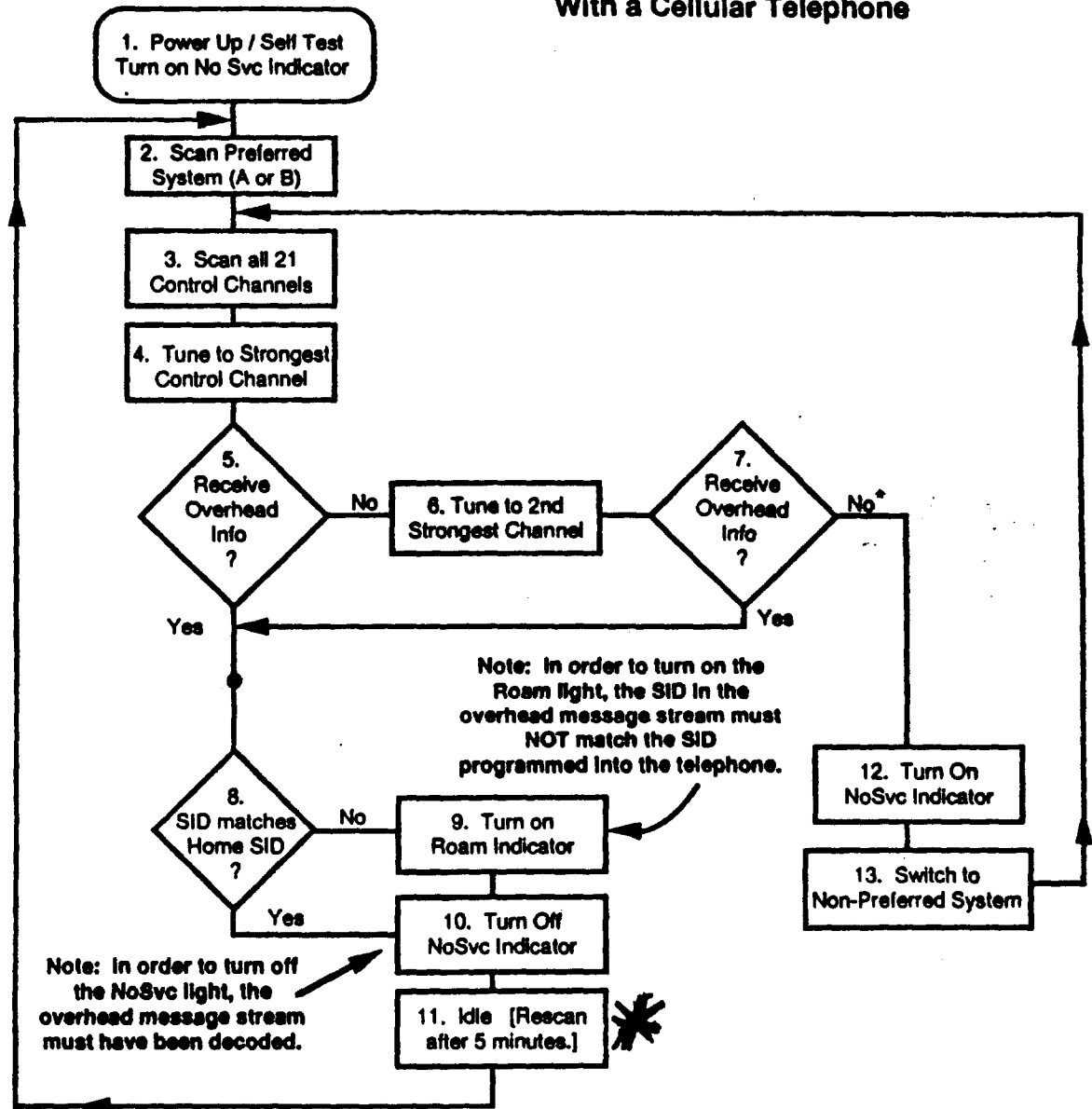
Mrs. MORELLA. I yield to the gentleman from Florida.

Mr. M~~COLLUM~~. I thank the gentlewoman for her inquiry. In passing H.R. 2460, we do not intend to direct the FCC to act in one way or another on the pending petition for reconsideration that she has described. If the FCC were to change its rules, however, I think it is important for Members to understand that even though they did change those rules, the bill would still prevent the use, possession, production, and so forth, of hardware or software to insert or modify electronic serial numbers or other telecommunication identifying information to create extension phones. If the FCC does decide that a change in its rules serves the public interest, I would be willing to consider amending section 1029 in such a way as to conform the bill to the spirit of the FCC's decision, yet still making sure that this equipment would be unlikely to fall into the hands of criminals.

Mrs. MORELLA. Mr. Chairman, that sounds reasonable.

## Attachment 2

### Going Into Service With a Cellular Telephone



\* In those telephones with Motorola Enhanced Scan, more than two control channels are sampled before proceeding to step 12.